

## SYLLINAE (POLYCHAETA: SYLLIDAE) FROM CUBA AND THE GULF OF MEXICO

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### ABSTRACT

Thirteen species of Syllinae in the genera *Plakosyllis* Hartmann-Schröder, 1956, *Trypanosyllis* Claparède, 1864, *Opisthosyllis* Langerhans, 1879, *Dentatisyllis* Perkins, 1981, *Haplosyllis* Langerhans, 1879, *Branchiosyllis* Ehlers, 1887, and *Parasphaerosyllis* Monro, 1937, principally from Cuba but also from the Gulf of Mexico, are reported in this paper. A new species from the Gulf of Mexico is described, *Opisthosyllis longidentata*, characterized by having a very long pharyngeal tooth and irregularly wrinkled posterior cirri. The species *T. prampramensis* Augener, 1918 is new to the Caribbean and Gulf of Mexico region. *Plakosyllis quadrioculata* Perkins, 1981, *Trypanosyllis vittigera* Ehlers, 1887, *Dentatisyllis carolinae* Perkins, 1981, *Branchiosyllis exilis* (Gravier, 1900) and *Parasphaerosyllis indica* Monro, 1937, are new to the Cuban fauna. One species of *Branchiosyllis* and of *Trypanosyllis* are identified to generic level.

This paper is the fourth in a series dealing with the syllids collected in Cuba during the "Primera Expedición Cubano-Española a la Isla de la Juventud y Archipiélago de los Canarreos" and from the Caribbean and Gulf of Mexico. The syllid material from the Gulf of Mexico was collected for the U.S. Department of Interior, Mineral Management Services, contract number AA551-CT9-35. Types and other material are deposited in the Museo Nacional de Ciencias Naturales de Madrid (MNCNM), Spain, United States National Museum (USNM), Washington, D.C., and in the author's collection (without initials) as indicated in the text.

### METHODS

Measurements either refer to the holotype or the largest specimen studied; width is measured across the proventriculus and excludes cirri, parapodia, and setae. Microscope preparations of some complete specimens were made in glycerine. Observations, drawings, and measurements were made using a microscope with interference contrast optics. Drawings were made with the aid of a drawing tube.

Additional information, including station locations and field data, is presented by San Martín et al. (1986). Perkins and Savage (1975) and Ibarzábal (1986, 1988) were consulted for verification of new records.

### Genus *Plakosyllis* Hartmann-Schröder, 1956 *Plakosyllis quadrioculata* Perkins, 1981

Perkins, 1981: 1108, figs. 11, 12; Uebelacker, 1984: 101, figs. 95, 96.

*Material Examined.*—Cuba: Between Punta del Este, Isle of Pines, and Cayo Matías, Archipiélago de los Canarreos; coarse calcareous sand; 18 m depth; 6 specimens. Off Punta Pedernales, Isle of Pines; coarse calcareous sand; 50 m depth; 1 specimen. Off Cayo Matías; coarse calcareous sand; 6 m depth; 3 specimens (MNCNM). Between Punta del Este and Cayo Matías; *Halimeda* sp. in *Thalassia testudinum* beds; 1 specimen. Off Punta Pedernales; coarse calcareous sand; 35 m depth; 3 specimens.

*Distribution.*—Florida, Gulf of Mexico, and Cuba.

### Genus *Trypanosyllis* Claparède, 1864 *Trypanosyllis vittigera* Ehlers, 1887

Ehlers, 1887: 151, pl. 40, figs. 1-3.

*Material Examined.*—Cuba: Off Punta Pedernales, Isle of Pines; inside living coral; 1.5 m depth; 2 specimens (MNCNM). Same station; inside dead coral; 4 m depth; 2 specimens. Near Colony Hotel, Ensenada de la Siguanea; sand and *Thalassia* bottom; 1–3 m depth; 1 specimen (USNM). Canal de los Vapores, Cayo Bocas de Alonso; hydroids on *Rhizophora mangle* roots; 1 m depth; 1 specimen.

*Remarks.*—Specimens of *Trypanosyllis zebra* from the Mediterranean Sea are identical in general aspect of body and setae to these specimens from Cuba. However, one dissected specimen from Cuba has only 8 large teeth, and other dissected specimens from the Mediterranean have 10 smaller teeth, without a middorsal tooth. Uebelacker (1984) described as *T. vittigera* specimens from the Gulf of Mexico with a trepan composed of 10 teeth and much smaller proventriculus. A revision of *T. zebra* and related species is needed.

*Distribution.*—Florida, Gulf of Mexico, West Indies, and Cuba.

### *Trypanosyllis gemmipara* Johnson, 1901

Johnson, 1901: 405, figs. 72–76; Day, 1967: 256, fig. 12.6c; Hartman, 1969: 467; Campoy, 1982: 362, fig. 361; San Martín, 1984: 281, fig. 66.

*Trypanosyllis (Trypanedenta) gemmipara* Johnson, 1901. Imajima and Hartman, 1964: 126, fig. 30f, g; Imajima, 1966: 239, fig. 45.

*Material Examined.*—Cuba: Canal de los Vapores, Cayo Bocas de Alonso; inside sponges on *Rhizophora mangle* roots; 0.5 m depth; 3 specimens (MNCNM).

*Distribution.*—Circumtropical.

### *Trypanosyllis* species

#### Figure 1A–K

*Material Examined.*—Cuba: Off Punta del Francés, Isle of Pines; coralline rock from the rubble and pavement zone; 1 m depth; 1 specimen (MNCNM).

*Description.*—Small specimen, juvenile, with short appendages; parapodia long, ending in two digitiform lobes; parapodia each with both compound falcigers strongly heterogomomorph and simple setae resulting from fusion of blade and shaft, blades of compound setae bidentate, numbering three to four on each anterior parapodium, one to three posteriorly; simple setae, numbering two to three anteriorly, two posteriorly, strongly bidentate, subdistally expanded, provided with an acute spur; anterior simple setae with blades and shafts not completely fused. Dorsal simple setae not seen, solitary ventral simple setae on far posterior setigers, smooth, bidentate. Pharynx short and narrow, through about two segments. Trepan composed of six acute, triangular teeth, surrounded by six soft lobes. Proventriculus short, very thin, slightly longer than pharynx, with about 30 muscle cell rows.

*Remarks.*—This specimen is similar to *T. inglei* Perkins (1981) in having compound and simple setae formed by blade and shaft fusion; however, the simple setae of *T. inglei* are only present on the anterior parapodia and they are unidentate whereas this specimen has both kinds of setae on each parapodium and the simple setae are strongly bidentate. The general aspect of the body, dorsal cirri, proventriculus, compound setae and acicula of this specimen are very similar to those of *T. savagei* Perkins (1981), however, this species lacks simple setae that exhibit shaft and blade fusion.

This specimen probably belongs to a new species; however, that determination cannot be confirmed because it is a juvenile.

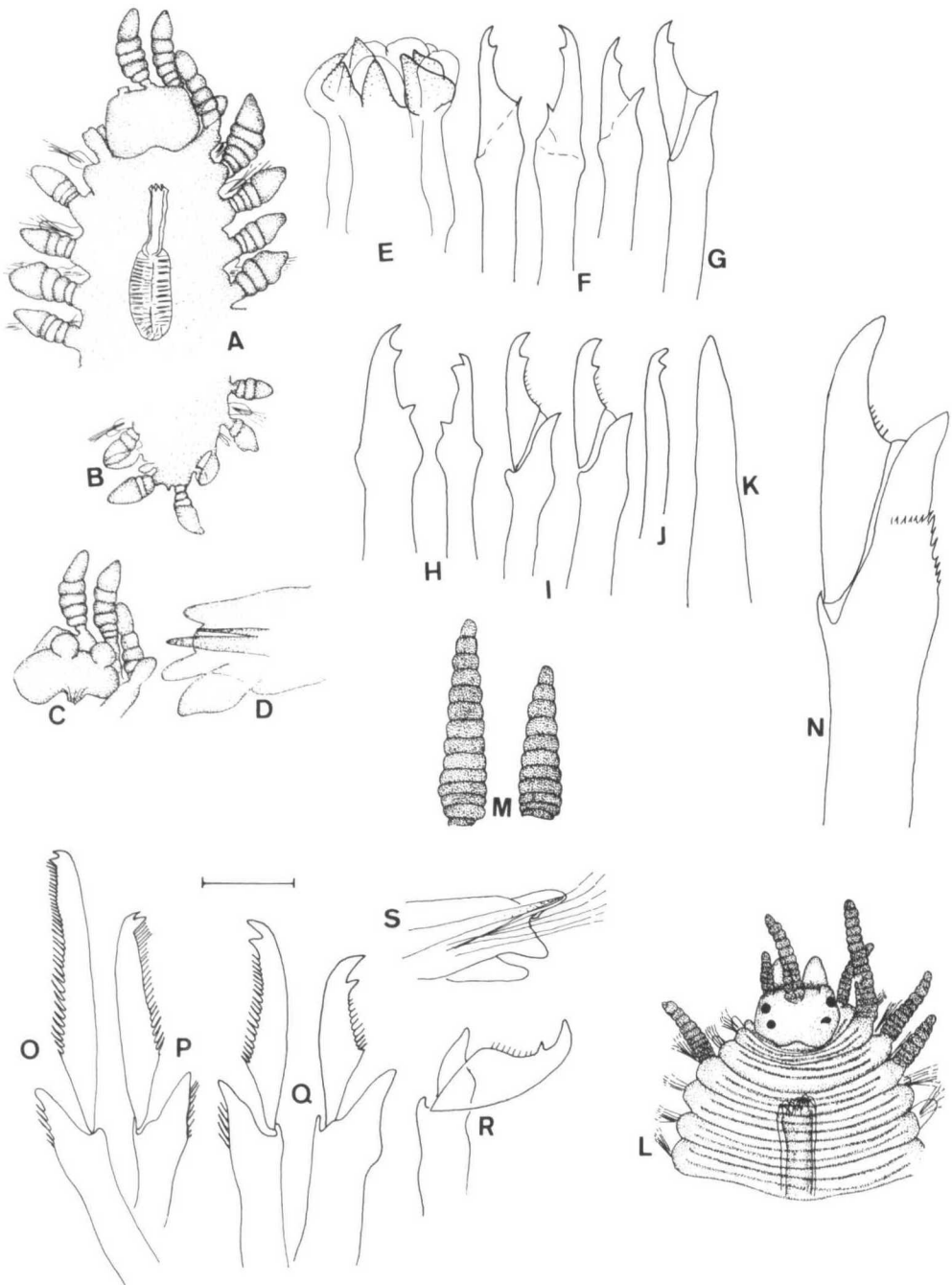


Figure 1. *Trypanosyllis* sp: A, anterior end, dorsal view; B, posterior end, dorsal view; C, anterior end, ventral view; D, parapodium, midbody; E, trepan; F, simple setae, anterior parapodium; G, compound seta, anterior parapodium; H, simple setae, posterior parapodium; I, compound setae, posterior parapodium; J, capillary ventral simple seta, posterior parapodium; K, acicula, posterior parapodium. *Trypanosyllis prampramensis* Augener, 1918: L, anterior end, dorsal view; M, long and short dorsal cirri, midbody; N, compound seta, midbody. *Branchiosyllis* sp: O–Q, compound setae, anterior parapodium; R, claw-shaped seta, 14th parapodium; S, parapodium, midbody. Scale. A–C: 42  $\mu\text{m}$ ; E, D, S: 13  $\mu\text{m}$ ; L: 85  $\mu\text{m}$ ; M: 41  $\mu\text{m}$ . F–K, O–R: 10  $\mu\text{m}$ .

*Trypanosyllis prampramensis* Augener, 1918

## Figure 1L–N

Augener, 1918: 276, figs. 91, 92, text-fig. 26; Day, 1967: 255, fig. 12.5h–k.

*Material Examined.*—Cuba: Cayo Matías, Archipiélago de los Canarreos; *Halimeda* sp.; 3 m depth; 3 specimens, (1 in NMCNM) and (1 in USNM).

*Description.*—Body very long, flattened, ribbon-like, 180 mm length, 1.3 mm width, 131 setigers. Segments at proventricular level about eight times wider than long. Two thin reddish lines across each anterior segment, dorsal cirri dark reddish, especially on middle and posterior segments; one specimen with significantly more red pigment. Prostomium quadrangular, bilobed posteriorly, with rounded margins. First setiger partially covering tentacular segment and posterior end of prostomium. Four eyes in trapezoidal arrangement. Lateral antennae originating near anterior margin, median one slightly posteriorly; median antenna with about 12 articles, lateral antennae with about 7 articles. Dorsal tentacular cirri with about 12 articles, ventral tentacular cirri with 8–9 articles. Palps free from each other, triangular, originating ventrally, approximately half length of prostomium. Dorsal cirri, short and thick, generally all similar in length anteriorly, alternating long cirri, 13–14 articles, and short cirri, 10–11 articles in midbody and posteriorly. Parapodia conical, each with distal dorsal lobe; ventral cirri short, ovate. Setae similar throughout, all compound, strongly heterogomph falcigers with short, unidentate, nearly smooth blades. Median parapodia each with about seven to eight compound setae, blades about 37  $\mu$ m length. Acicula very thick, straight, emergent from parapodial lobes, usually two acicula in each parapodia. Pharynx long, relatively narrow, with thin walls, through about 15 segments. Trepan with 10 triangular, acutely pointed teeth, anterior opening surrounded by 10 soft lobes. Proventriculus long, relatively narrow, through eight segments, fiber bundles arranged in rows, but number of muscle cell rows not perceptible in these specimens because the proventriculus is very dark and thick.

*Remarks.*—*Trypanosyllis prampramensis* is characterized by its short, fusiform dorsal cirri and compound setae provided with short, unidentate blades. Nine species have been previously reported from the Caribbean and Gulf of Mexico area: *T. gemmipara* Johnson, 1901; *T. vittigera* Ehlers, 1887; *T. zebra* (Grube, 1860) (fide Perkins and Savage, 1975); *T. coeliaca* Claparède, 1868; *T.inglei* Perkins, 1981; *T. parvidentata* Perkins, 1981; *T. savagei* Perkins, 1981 (fide Perkins, 1981); *Trypanosyllis* sp. B and *Trypanosyllis* sp. C (fide Uebelacker, 1984). Furthermore, Verrill (1900) described three species from Bermuda: *T. attenuata*, *T. fertilis* and *T. tenella*. All these species have bidentate setae, except *T.inglei*. *Trypanosyllisinglei* has several anterior simple setae resulting from fusion of blade and shaft, shorter dorsal cirri and upper compound setae provided with long spines on cutting margin of blade.

*Distribution.*—Tropical western Africa, and Cuba.

Genus *Opisthosyllis* Langerhans, 1879  
*Opisthosyllis brunnea* Langerhans, 1879

Langerhans, 1879: 541, fig. 7; Augener, 1918: 274, text-fig. 25; Day, 1967: 253, figs. 12.5c–e; Cantone, 1976: 229, fig. 2, 3; San Martín, 1984: 311, figs. 75, 76.

*Non Opisthosyllis brunnea* Imajima, 1966: 230, fig. 42.

*Opisthosyllis nuchalis* Verrill, 1900. Verrill, 1900, p. 620–622.

*Material Examined.*—Cuba: Off Punta del Francés, Isle of Pines; inside dead coral; 1 m depth; 7 specimens. Off Cayo Matías, Archipiélago de los Canarreos; *Turbinaria turbinata*; 3 m depth; 1 specimen (MNCNM). Same station, *Halimeda* sp.; 3 m depth; 1 specimen (USNM).

*Distribution.*—Circumtropical.

***Opisthosyllis longidentata* new species**

**Figure 2**

*Opisthosyllis* sp. A. Uebelacker, 1984: 103, figs. 97, 98.

*Material Examined.*—U.S.A.: Florida, MAFLA Sta., off St. Petersburg, 27°56'30"N, 83°53'W; 43 m depth; coarse sand; holotype (USNM 65678). Florida, SOFLA Sta., 45°49'N, 83°32'7"W; 56 m depth; medium sand; paratype (USNM 75295).

*Description.*—Body long, thin, filiform, without color marking, about 20 mm long, 0.2 mm wide, 107 setigers. Prostomium ovate, four small eyes with lenses in open trapezoidal arrangement and two anterior eyespots. Median antenna longer than prostomium and palps together, originating between posterior eyes, with about 19 articles; lateral antennae shorter than median antenna, originating between anterior eyes and eyespots, with about 15 articles. Palps long, triangular, fused at bases. Two ciliated nuchal organs. Tentacular segment similar to following segments, slightly shorter; dorsal tentacular cirri with about 16–19 articles, ventral tentacular cirri 11–15 articles. Dorsal cirri alternating long and short; anterior dorsal cirri with about 18–26 articles, dorsal cirri of midbody with longer and thinner articles, gradually more irregularly wrinkled posteriorly, alternating long cirri with about 22 articles and short cirri, similar in length to body width, with about 15 articles; dorsal cirri of posterior segments very thin, delicate, nearly smooth. Parapodia elongate, very long, each with distinct antero-lateral dorsal, digitiform, lobe; ventral cirri digitiform, very long, extending past tips of parapodial lobes. Compound setae all heterogomph falcigers, similar throughout; marked dorso-ventral gradation in shape and length. Median parapodium each with about 11 compound setae, shafts with fine, moderately long subdistal spines; dorsalmost blades long, about 45  $\mu$ m long, indistinctly bidentate with proximal tooth slightly longer than distal one, and moderately long, distally dressed row of spines; remaining setae with blades similar but shorter, 35  $\mu$ m above, 25  $\mu$ m below, with longer and coarser spines on cutting margin, especially on longer blades. Acicula difficult to observe, slender. Acicula numbering three to four in each anterior parapodium, number decreasing posteriorly to only 1 in posterior setigers, acute, straight, with fine, long, filiform tip. Solitary dorsal simple seta in far posterior setigers, indistinctly bifid, with short, fine subdistal spines. Solitary ventral simple setae in far posterior setigers, similar to dorsal simple seta but distinctly bidentate. Pharynx cylindrical, long, through about seven segments; anterior margin surrounded by 20 soft, small lobes; pharyngeal tooth very long, approximately equal in length to length of anterior segment, acute, arrow-shaped, located anterior to midlength of pharynx. Proventriculus slender, about as wide and shorter than pharynx, with about 30 muscle cell rows, through about four segments. Ventriculus very muscularized, long, through about seven segments. Pygidium small, rounded, anal cirri short, smooth.

*Remarks.*—*Opisthosyllis longidentata*, n. sp., is the only species of the genus provided with long parapodial lobes, very long ventral cirri, and irregularly wrinkled to nearly smooth dorsal cirri on middle and posterior segments. Furthermore the known species of *Opisthosyllis* both have a much smaller pharyngeal tooth, usually located more posteriorly than in *O. longidentata*.

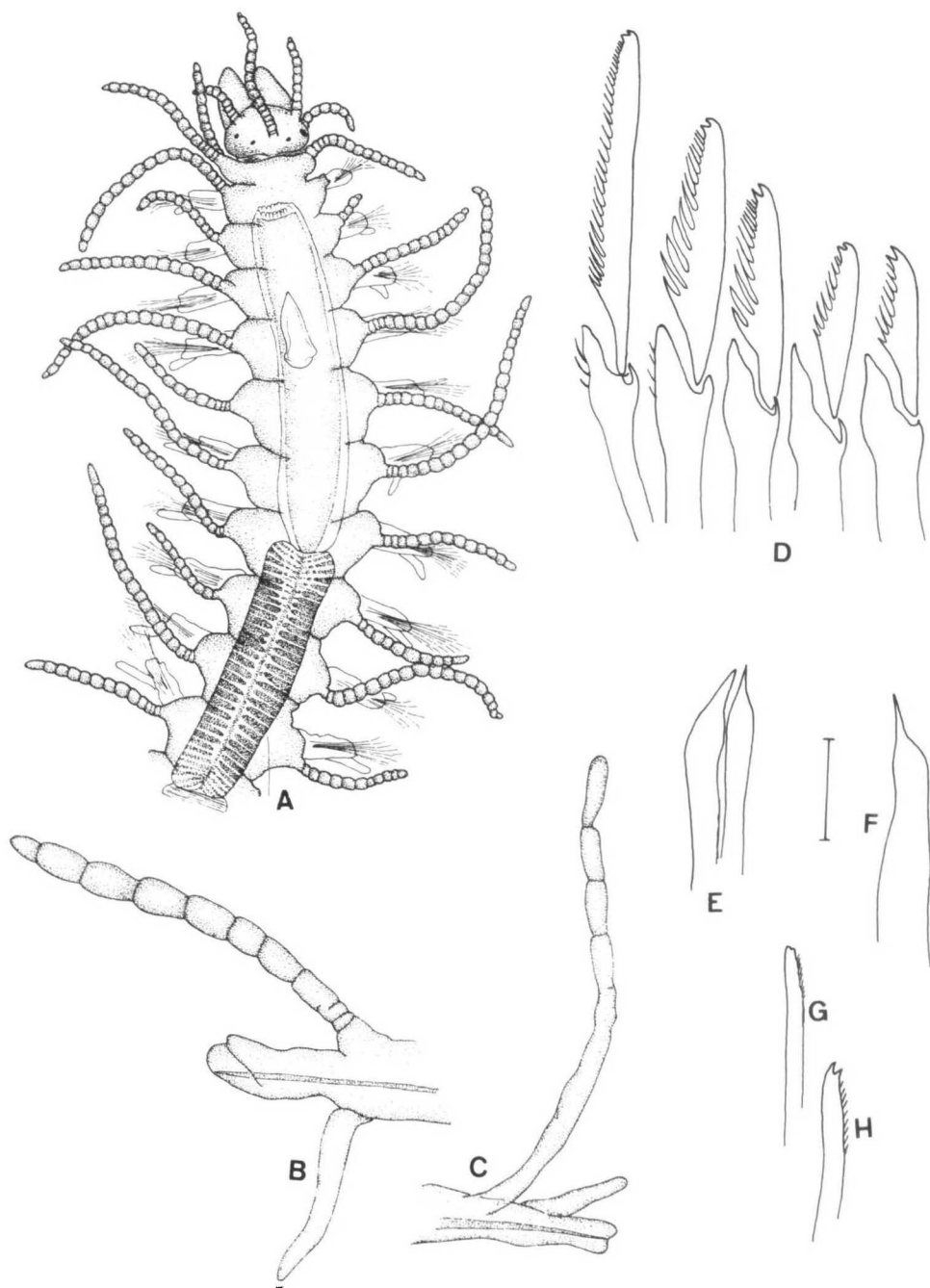


Figure 2. *Opistosyllis longidentata*, n. sp.: A, anterior end, dorsal view; B, parapodium, midbody; C, parapodium, posterior; D, compound setae, midbody; E, aciculae, midbody; F, acicula, posterior; G, capillary dorsal simple seta; H, capillary ventral simple seta. Scale. A: 41  $\mu\text{m}$ . B, C: 20  $\mu\text{m}$ ; D–H: 10  $\mu\text{m}$ .

Genus *Dentatisyllis* Perkins, 1981  
*Dentatisyllis carolinae* (Day, 1973)

Perkins, 1981: 1166, figs. 38a–h; Uebelacker, 1984: 113, figs. 107, 108.

*Material Examined.*—Cuba: Between Punta del Este, Isle of Pines, and Cayo Matías, Archipiélago de los Canarreos; inside dead coral; 4 m depth; 10 specimens. Off Punta Pedernales, Isle of Pines; coarse calcareous sand; 35 m depth; 5 specimens. Between Punta del Este and Cayo Matías; coarse calcareous sand; 18 m depth; 2 specimens. Off Punta del Francés, Isle of Pines; inside coralline rock from rubble and pavement zone; 1 m depth; 1 specimen.

*Distribution.*—North Carolina, Florida, Gulf of Mexico, and Cuba.

Genus *Haplosyllis* Langerhans, 1879  
*Haplosyllis spongicola* (Grube, 1855)

Imajima, 1966: 220, fig. 38; Westheide, 1974: 35, fig. 14; San Martín, 1984: 318–322, fig. 77; Uebelacker, 1984: 109, 110, figs. 103, 104.

*Syllis* (*Haplosyllis*) *spongicola* Fauvel, 1923: 257, fig. 95a–d; Day, 1967: 240, fig. 12.1e–i; Gardiner, 1976: 139, fig. 12c–k; Ben-Eliahu, 1977: 18.

*Material Examined.*—Cuba: Canal de los Vapores, Cayo Bocas de Alonso; in sponges on *Rhizophora mangle* roots; 0.5 m depth; numerous specimens (USNM). Off Punta Pedernales, Isle of Pines; inside living coral; 1.5 m depth; 25 specimens (MNCNM). Off Cayo Matías, Archipiélago de los Canarreos; algae *Styopodium zonale*; 3 m depth; 1 specimen. Between Cayo Matías and Punta del Este; *Halimeda* sp.; 3 m depth; 1 specimen. Off La Herradura (N.W. from La Havana); algae; 1–3 m depth; 5 specimens. Canal de los Vapores; hydroids on *Rhizophora mangle* roots; 0.5 m depth; 13 specimens. Off Punta Pedernales; inside dead coral; 4 m depth; 10 specimens. Between Punta del Este and Cayo Matías; algae; 18 m depth; 10 specimens. Off Punta del Francés, Isle of Pines; inside dead coral; 1 m depth; 1 specimen. Off Cayo Matías; *Halimeda* sp.; 3 m depth; 54 specimens.

*Distribution.*—Cosmopolitan.

Genus *Branchiosyllis* Ehlers, 1887  
*Branchiosyllis exilis* (Gravier, 1900)

Westheide, 1974: 60, fig. 26; Uebelacker, 1984: 105–107, figs. 99, 100; San Martín, 1984: 294–303, figs. 69–72.

*Syllis exilis* Gravier, 1900: 160, figs. 28–30.

*Material Examined.*—Cuba: Between Punta del Este, Isle of Pines, and Cayo Matías, Archipiélago de los Canarreos; algae; 18 m depth; 1 specimen. Off Punta del Francés, Isle of Pines; in dead coral; 1 m depth; 8 specimens (MNCNM). Off Cayo Matías; *Halimeda* sp.; 3 m depth; 32 specimens (MNCNM). Off Punta del Francés; under stones; 4 m depth; 1 specimen. Off Cayo Matías; algae *Styopodium zonale*; 3 m depth; 1 specimen. Off Punta Pedernales; in living coral; 1.5 m depth; 3 specimens. Off Punta del Francés; algae; 4 m depth; 4 specimens. Canal de los Vapores, Cayo Bocas de Alonso, Archipiélago de los Canarreos; in sponges on *Rhizophora mangle* roots; 0.5 m depth; 16 specimens. Between Cayo Matías and Punta del Este; *Halimeda* sp. on *Thalassia testudinum* beds; 3 m depth; 15 specimens (USNM). Off Punta Pedernales, Isle of Pines; in dead coral; 4 m depth; 1 specimen. Canal de los Vapores; hydroids on *R. mangle* roots; 0.5 m depth; 3 specimens. Between Punta del Este and Cayo Matías; in dead coral; 4 m depth; 3 specimens.

*Distribution.*—Circumtropical.

*Branchiosyllis oculata* Ehlers, 1887

Ehlers, 1887: 148, figs. 1–7; Rioja, 1958: 240–242, fig. 7; Uebelacker, 1984: 107–109, figs. 101, 102.

*Material Examined.*—Cuba; Canal de los Vapores, Cayo Bocas de Alonso, Archipiélago de los Canarreos; inside sponges on *Rhizophora mangle* roots; 0.5 m depth; 9 specimens (2 in MNCNM).

*Distribution.*—Caribbean and Gulf of Mexico area.

*Branchiosyllis* species  
Figure 1O–S

*Material Examined.*—Cuba: Off Cayo Matías, Archipiélago de los Canarreos; *Halimeda* sp.; 3 m depth; 1 specimen.

*Remarks.*—The solitary specimen is an anterior fragment of 14 setigers. General aspect of the body, prostomium, parapodia and digestive tract are very similar to *B. exilis*. However, this specimen differs from that species in having on each parapodium two dorsalmost compound setae with long blades (Fig. 1O), provided with a dense row of spines and the proximal tooth longer than distal one; the remaining setae are very different, short, somewhat hooked and provided with a proximal tooth shorter than distal one; the claw-shaped setae begin in the last setiger of this fragment.

This specimen probably belongs to a new species because no known species of this genus has been described with that kind of dorsalmost compound setae (Fig. 1O). It is not possible to describe it as a new species because this specimen is largely incomplete.

Genus *Parasphaerosyllis* Monro, 1937  
*Parasphaerosyllis indica* Monro, 1937

Rioja, 1958: 246–251, figs. 21, 22, 26, 27; Westheide, 1974: 64–66, figs. 27–29.

*Material Examined.*—Cuba: Off Punta del Francés, Isle of Pines; inside dead coral; 1 m depth; 11 specimens (MNCNM). Off Punta Pedernales, Isle of Pines; same substrate; 4 m depth; 2 specimens. Off Cayo Matías, Archipiélago de los Canarreos; algae *Stypopodium zonale*; 3 m depth; 1 specimen. Between Punta del Este and Cayo Matías; *Halimeda* sp. in *Thalassia testudinum* beds; 3 m depth; 2 specimens. Same station; inside dead coral; 4 m depth; 1 specimen. Off Cayo Matías; *Halimeda* sp.; 3 m depth; 2 specimens (USNM). Off Punta Pedernales; inside living coral; 1.5 m depth; 43 specimens.

*Distribution.*—Circumtropical.

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